CLAIMS

1. A method to assist the piloting of an aircraft in a non-precision approach during a landing phase, wherein the following series of successive steps is carried out interactively and automatically:

a) there is verified a plurality of conditions relating at least to the correct functioning of a plurality of the aircraft's equipments and to the integrity and precision of measurements of particular parameters, information coming from the said equipments and the said measurements being able to be used for the implementation of the said non-precision approach;

b) on the basis of the said verified conditions, an appropriate approach category is selected from a plurality of different approach categories; and

c) the approach category thus selected is presented on a display screen (10).

2. The method as claimed in claim 1, wherein the conditions verified in step a) comprise at least some of the following conditions:

- the correct functioning of each of the aircraft's two flight management computers;
- the correct functioning of a satellite positioning function of each of the aircraft's two multimode landing assistance receivers;
- the correct functioning of an assisted approach mode function of each of the aircraft's two multimode landing assistance receivers;
- the correct functioning of each of the aircraft's two multimode landing assistance receivers;
- the correct functioning of each of the aircraft's three inertial reference systems, integrating aerodynamic data;
- the correct functioning of an attitude and direction indicator of the aircraft;
- the integrity and precision of a position value of the aircraft;
- the uncertainty regarding this position value of the aircraft;
- the consistency between a position of the aircraft, calculated by a flight management computer of the aircraft, and a position of the aircraft received from a satellite positioning system; and
- the precision of an altitude value of the aircraft.

3. The method as claimed in claim 1, wherein the conditions verified in step a) furthermore comprise the correct functioning of an automatic pilot of the aircraft.

4. The method as claimed in claim 1, wherein in step b) a first approach category is determined when the following conditions are verified simultaneously:

- two flight management computers of the aircraft are functioning correctly;
- satellite positioning functions of two multimode landing assistance receivers of the aircraft are functioning correctly;
- at least two inertial reference systems of the aircraft, integrating aerodynamic data, are functioning correctly;
- at least one assisted approach mode function of a multimode landing assistance receiver of the aircraft is functioning correctly;
- an altitude value of the aircraft has a precision that is greater than a predetermined value;
- the integrity and precision of a position value of the aircraft are achieved; and
- a position of the aircraft, calculated by a flight management computer of the aircraft, and a position of the aircraft, received from a satellite positioning system, are consistent.

5. The method as claimed in claim 1, wherein in step b) a second approach category is determined when the following conditions are verified simultaneously:

- at least one flight management computer of the aircraft is functioning correctly;
- at least one inertial reference system of the aircraft, integrating aerodynamic data, is functioning correctly;
- at least one assisted approach mode function of a multimode landing assistance receiver of the aircraft is functioning correctly; and
- a position value of the aircraft exhibits low uncertainty.

6. The method as claimed in claim 1, wherein in step b) a third approach category is determined when the following conditions are verified simultaneously:

- at least one flight management computer of the aircraft is functioning correctly;
- at least one inertial reference system of the aircraft, integrating aerodynamic data, is functioning correctly;
- at least one assisted approach mode function of a multimode landing assistance receiver of the aircraft is functioning correctly; and
- a position value of the aircraft exhibits high uncertainty.

7. The method as claimed in claim 1, wherein in step b) a fourth approach category is determined when at least one of the following conditions A, B, C and D is verified:

A/ two flight management computers of the aircraft are not functioning correctly;

B/ two multimode landing assistance receivers of the aircraft are not functioning correctly;

C/ three inertial reference systems of the aircraft, integrating aerodynamic data, are not functioning correctly;

D/ assisted approach mode functions of two multimode landing assistance receivers of the aircraft are not functioning correctly.

8. A device to assist in the piloting of an aircraft in a non-precision approach during a landing phase, wherein it comprises:

- first means (4) of verifying a plurality of conditions relating to at least the correct functioning of a plurality of equipments of the aircraft, and to the integrity and precision of measurements of particular parameters, information coming from the said equipments and the said measurements being able to be used for the implementation of the said non-precision approach;
- second means (6) for selecting, on the basis of the said verified conditions, an appropriate approach category from among a plurality of different approach categories; and
- display means (8) for presenting, on a display screen (10) of the aircraft, the approach category selected by the said second means (6).

9. The device as claimed in claim 8, wherein the said display screen (10) is a primary screen for piloting the aircraft and wherein the said display means (8) present the said approach category in a zone (12) of the said

primary piloting screen (10), which is usually used for the display of an approach category during an instrument approach.

10. An aircraft, wherein it comprises a device capable of implementing the method as claimed in claim 1.